## Abstract of the Disclosure

Provided are a method and apparatus for compensating for a frequency offset in an interleaved frequency division multiple access. The method compensates for a frequency offset between a transmission signal and a reception signal for a $u^{th}$ user

5      ($1 \leq u \leq U$, where U denotes the number of users) in an interleaved frequency division multiple access. The method includes: (a) estimating the frequency offset from a selection signal that is determined as the reception signal for the $u^{th}$ user in an initial mode and as a feedback signal in a normal mode; (b) estimating multiple access interferences representing an extent to which reception signals for $i^{th}$ other

10      users ($1 \leq i \leq U-1$) at the same time interfere with the reception signal for the $u^{th}$ user; (c) subtracting the estimated multiple access interferences from the reception signal for the $u^{th}$ user and determining the subtraction result as the feedback signal; (d) determining whether steps (a), (b), and (c) have been repeated a predetermined number of times, and if it is determined that steps (a), (b), and (c) have not been

15      repeated the predetermined number of times, going back to step (a); and      (e) if it is determined that steps (a), (b), and (c) have been repeated the predetermined number of times, estimating the transmission signal for the $u^{th}$ user using the feedback signal finally determined in step (c) and the estimated frequency offset.